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ABSTRACT

A Study of the relationship between the primary and secondary journal literature of a social science discipline is described in this working paper. Criminology was chosen as the subject area for study, because it forms a fairly clearly identifiable area of the social sciences, is fairly self-contained, and because it has some distinctive bibliographical services devoted to it which are relatively easy to locate. Criminology is closely related to some other social sciences, for example, psychology and sociology, so that comparative studies of other social science secondary services can be made. The term "secondary literature" encompasses a wide variety of publications, including review literature of many types. In this particular study a more limited, although still broad, definition of secondary literature is adopted; it includes conventional abstracting and indexing services, but also primary journals which contain some secondary material, and various types of recurring bibliography. The method of study and analysis described could be applied to a study of the relationship between the primary and secondary literatures of other subjects; for the present, criminology provides a manageable test bed for the techniques proposed. Three aspects of bibliographical control in the field of criminology are dealt with and data is being collected on five parameters of abstracting services. (Author/NH)

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Design of Information Systems in the Social Sciences

Working Paper No. 3

THE RELATIONSHIP BETWEEN PRIMARY AND SECONDARY LITERATURE IN THE SOCIAL SCIENCES: A STUDY OF SECONDARY LITERATURE IN CRIMINOLOGY

June 1972

LI 004 168

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PREFACE

This working paper is the result of the joint efforts of members of the DISISS team. Mr. Brittain, Mr. Roberts, and Mr. Line drafted sections of the paper with assistance from Miss Skelton. Assistance was also given by Mr. Bradshaw, and by Mrs. Layzell Ward, Mr. Nicholas, and Miss Ritchie.

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1.0 INTRODUCTION

DISISS (Design of Information Systems in the Social Sciences) is a research project based at the University of Bath. The objective of the project is to carry out research necessary for the effective design of information systems in the social sciences, whether by the creation of new systems or the modification of existing systems. The project, which is financed by OSTI, commenced in January 1971 and will run until the end of 1973.

Work on other parts of the project is being reported in a number of working papers which are listed in Appendix D. These working papers, together with an outline of work carried out in 1971, can be obtained from the Library, University of Bath.

1.1 Objectives

This working paper describes a study of the relationship between the primary and secondary journal literature of a social science discipline. Criminology was chosen as the subject area for study, because it forms a fairly clearly identifiable area of the social sciences, is fairly self-contained, and because it has some distinctive bibliographical services devoted to it which are relatively easy to locate. Criminology is closely related to some other social sciences, for example, psychology and sociology, so that comparative studies of other social science secondary services can be made.

The term "secondary literature" encompasses a wide variety of publications, including review literature of many types. In this particular study a more limited, although still broad, definition of secondary literature is adopted; it includes conventional abstracting and indexing services, but also primary journals which contain some secondary material, and various types of recurring bibliography (see 2.1).

The method of study and analysis described could be applied to a study of the relationship between the primary and secondary literatures of

other subjects; for the present, criminology provides a manageable test bed for the techniques proposed.

Three aspects of bibliographical control in the field of criminology are dealt with in this paper. These are:

(a) identification of the abstracting, indexing and other secondary publications (i) specific to criminology, (ii) with more general coverage but including criminology, and (iii) oriented to other disciplines, but containing material relevant to criminology

(b) relationship between the secondary literature and the primary literature, in terms of journal coverage, including a measure of overlap

(c) rationalisation of secondary services; in particular, how this can be furthered by clustering primary journal titles according to citation frequencies, and by a study of coverage of secondary services

Data is being collected on five parameters of abstracting services. These are:

(a) coverage of journal titles by each service and comparisons of overlap in coverage between services. Actual coverage will be compared with potential coverage derived from journal title clusters. The ratio of actual to potential coverage provides a measure of scope which can be used for comparison of different services. Coverage can also be related to groups[1] of journals in other social science disciplines and within the universe of social science journals. Coverage of "core" journals would give a measure of depth of coverage

(b) breadth of coverage. A measure of range of coverage is

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[1]Groups of journals might be derived from (a) ranked lists of journals; (b) bibliographies of serials; (c) lists of "core" journals.

useful, showing interdisciplinary affiliations and the nature of "fringe" material considered relevant to a subject. The data base of social science serials (CLOSSS)[1] being compiled by DISISS provides a base for measuring breadth of coverage

(c) coverage of articles in primary journals by different abstracting services

(d) time lag between appearance of an article in a primary journal and its first appearance in a secondary service

(e) frequency of issue of the secondary service. This parameter will be considered in relation to breadth of coverage

These five parameters considered together will give a good indication of the effectiveness of secondary services.

2.0 METHOD OF STUDY

2.1 Selection of secondary service titles

A list of secondary service titles for the descriptive bibliometric studies[2] has been compiled containing c. 1,600 titles and this list was searched for titles relevant to criminology. The list of c. 1,600 titles includes abstracting and indexing journals, primary journals that include abstracts, yearbooks, regular reports of work in progress, annuals and recurring bibliographies of international, national and local scope. Recognised bibliographical sources, guides to, and surveys of, the literature were used in the compilation of the list.

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[1] CLOSSS: Check List of Social Science Serials. For a discussion see Roberts, S.A. A machine readable data base of social science serials. (DISISS Working Paper no. 2). Bath University, Library, November 1971.

[2] Bibliometric studies include quantitative and descriptive accounts of the nature, growth, size and composition of the primary and secondary literatures.

At first over 20 titles appeared to be concerned specifically with criminology, but after a closer look at content - for example some only reviewed books, others were not strictly criminology - only 14 titles appeared to be relevant to the study. The 14 titles are listed in Appendix A. Other social science secondary services which will be examined to gauge the extent of their coverage of criminology are listed in Appendix B. In selecting secondary service titles, the results of INFROSS and the judgements of several social science librarians (see Appendix B) were also used.

The list of secondary services in criminology given in Appendix A contains very few "pure" indexing and abstracting publications; the study has therefore inevitably to investigate some low-grade bibliographical tools, for example, selections of new articles listed in primary journals, and a variety of other bibliographical services.

2.2 Data collection

The study aims to be as up to date as possible with regard to secondary services. However, secondary services published in 1970 rather than in 1971 or 1972 have been used in order to avoid difficulties in obtaining copies of the publications. A study of secondary services over time would be valuable, but it may be outside the scope of DISISS.

2.2.1 Coverage of journal titles

Primary journal titles covered by each secondary service were recorded and maintained as a card file (Appendix C). Each card carries the name of the journal, and spaces are provided for recording the secondary services in which the journal is covered.

The work of recording titles is made easier if the secondary service provides a list; where lists are not provided it is necessary to compile one by scanning all the entries in the service.

2.2.2 Overlap of journal titles

An analysis of overlap in coverage of journal titles by secondary services can be made by counting the entries on each journal title card

in the file (see 3.2).

2.2.3 Proportion of primary journal articles covered

There are four methods possible for investigating this aspect of coverage. These are explained below.

(a) Measurement of the proportion of articles in a sample of primary journals (covered by the service) which are indexed or abstracted in the secondary service

(b) Checking the percentage of papers in various bibliographies[1] that are covered by the secondary services

(c) Measurement of the proportion of articles derived from clustering which are indexed or abstracted in the secondary service

(d) Compilation of a list of all articles covered by the 14 secondary services. This list can then be used as the population of articles which any service can potentially cover

A problem with methods (a) and (c) is that not all the articles in the primary journals will be relevant.

Method (a) was used because the emphasis in this study is on the relationship of primary journals and secondary services, rather than on characteristics of secondary literature alone.

First, a sample of journal titles common to four or five secondary services will be obtained; then, articles published in these journals will be identified from the contents pages and the number of articles covered by each secondary service calculated by checking author indexes in the secondary services. Time lag in entry may affect comparisons of results between services but this can be allowed for as data on time lag is being collected (see 2.2.4).

For each primary journal taken, two measures result: (i) the coverage of primary journal articles by a given secondary service, and (ii) the extent to which overlap in article coverage occurs in secondary services.

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[1] The term bibliography is used here in the general sense of any collection of bibliographic references

2.2.4 Time lag in entry

The time lag in entry for the articles covered, identified by the method in 2.2.3, will be calculated for each secondary service. Data will be recorded as outlined in Appendix C.

2.2.5 Analysis of the journal title coverage by clusters

Data on coverage taken from the card file will be checked against journals contained in the journal title clusters. This procedure is described in 3.1(b), paragraph (vi).

2.2.6 Modelling data

Data on coverage of primary journal titles by secondary services and overlap between services will be necessary for a model of an abstracting service.[1] Data from clusters of primary journal titles will also be used in the model. The performance of the service is likely to be affected by differences in breadth, depth, cost and effectiveness of coverage.

3.0 ANALYSIS

3.1 Coverage of journal titles

The measures of journal title coverage will provide information on the relationship of the primary literature to the secondary literature. Two measures of coverage will be considered. These are:

(a) Frequency of occurrence of a primary journal in the secondary literature. The number of services which abstract or index each primary journal is counted and journals given a rank according to number of secondary services in which they appear. Preliminary results indicate that the primary journals can be placed in five groups - referred to as rank groups - on this measure.

Detailed analysis will be made of the titles which occur in each rank group; for example, country, subject and language

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[1] Development of a model of an abstracting service is being undertaken as part of the DISISS project

distribution.

A separate ranking of primary journals can be produced using data on the number of articles which could potentially be covered by the secondary service. This analysis would complement that based on data collected in section 2.2.3.

(b) Coverage patterns in individual secondary services. The main card file can be manipulated to produce:

(i) the number of titles covered by each service

(ii) a list of titles covered by the servic

(iii) a breakdown of the titles covered, by rank group; it may be possible to distinguish the function and nature of a secondary tool by the emphasis it gives to high and low ranked journals

(iv) analysis of journal titles covered by language, subject, and country of origin, using bibliographical data from CLOSSS

(v) primary journal titles covered by the individual secondary service, as a proportion of the universe of criminology-related journals (calculated from the card file)

(vi) the journal titles covered by each secondary service, compared with journal clusters derived from citation analysis. Overlap between and within clusters can be identified. Assessments will be made of the nature and significance of gaps in coverage

3.2 Overlap of journal titles

From the distribution of primary journal coverage (3.1), the extent to which secondary services overlap in coverage of journal titles can be calculated.

The overlap can be calculated by use of the data on the total number of journals associated with each service and can be expressed as a

percentage value. Overlap can also be calculated within each of the rank groups; the extent of overlap should diminish progressively with the lower ranking groups. Titles with very high and very low degrees of overlap will be identified and analysed, for example, by country of origin, subject, language, nature of contents, and frequency of publication.

Diagrammatic methods of showing overlap will be used. The journals covered by each abstracting service will be mapped to show the intersection of coverage of one service with any one of the others.

Groups of journal titles produced in the cluster analysis can be mapped onto the coverage patterns identified in the present study and comparisons made of potentially viable coverage patterns with existing patterns. This may give an indication of the way in which secondary services can be rationalised by redefining coverage. In practice, some redundancy in terms of coverage may be desirable and necessary.

3.3 Proportion of primary journal articles covered by secondary services

The method of analysis is described in 2.2.3. This analysis will give an indication of the proportion of articles in any journal that are covered by each secondary service.

Problems in carrying out this work and in interpreting the results include:

(a) different frequencies of issue of secondary services
(b) different frequencies of issue of primary journals
(c) selection of primary journals to include in the study from a large number - some 500 - that are covered by the secondary services.

This problem will be overcome by using the rank group data and taking only those journals covered by 4 or 5 secondary services.

3.4 Time lag in entry

The method of collecting data about time lag is described in 2.2.4. Data was collected in units of one month.

When interpreting the data it will be necessary to take account of the effect which frequency of publication may have upon measured time lag, and the discrepancy which sometimes exists between publication date and the time when the material becomes available to users.

3.5 Note on future work

Secondary services in one other social science discipline will be studied, using the methods described in this paper. The discipline will be either sociology, psychology, economics, or a more specialised field such as conflict research.

In addition to the present range of studies - which deal with the relationship between the primary and the secondary literatures - descriptive studies of individual secondary services will be attempted. A data record format has been developed for this type of study.

It is interesting to note that DISISS is not alone in pursuing investigations along the lines described in this paper. A study of the relationship between primary and secondary literature in science, using methods similar to those described here, has been reported by Wood, Flanagan and Kennedy (1972)[1]. Journal title coverage and overlap for Chemical Abstracts Service, Biosciences Information Service, and Engineering Index is analysed. Future work on coverage of articles within journals is proposed by the authors.

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[1] Wood, J.L., Flanagan, C., and Kennedy, H.E. Overlap in the lists of journals monitored by Biosis, CAS and Ei. Journal of the American Society for Information Science, 1972, 23(1), 36-38.

APPENDIX A

Secondary services relating to criminology

	location of study	
	Bath	PNL[1]
Abstracts of Bulgarian Scientific Literature - Economics and Law	*	
Abstracts on Criminology and Penology	*	
British Journal of Criminology	*	
Crime and Delinquency	*	
Crime and Delinquency Abstracts		*
Crime and Delinquency Literature		*
Documentatieblad (Ministerie van Justitie, Netherlands)		*
Documentation Juridique Étrangère		*
Howard Journal	*	
Issues in Criminology		*
Journal of Criminal Law, Criminology, and Police Science	*	
Journal of Research in Crime and Delinquency	*	
Liste Trimestrielles d'Articles Sélectionnés (Section Juridique de la Commission Internationale de Police Criminelle)		*
Revue de Droit Pénal et de Criminologie (Belgium)		*

[1] Polytechnic of North London

APPENDIX B

Social science secondary services
(Covering disciplines related to criminology)

Abstracts for Social Workers

American Behavioural Scientist

American Journal of Sociology

American Sociological Review

Année Sociologique

* Aslib Index to Theses

* British Education Index

* British Humanities Index

* Bulletin Signalétique (Section 390 Psychologie, etc.)

Centrale Sociologische Bibliografie (Utrecht)

Current Contents, Behavioral, Social and Educational Sciences

* Current Sociology

* Dissertation Abstracts International Series A

Document Review of the Library of the Institute of Social Studies (The Hague)

Education Index

Familles dans le Monde

Grinstein, A. The Index of Psychoanalytic Writings

* International Bibliography of the Social Sciences - Social and Cultural Anthropology

* International Bibliography of the Social Sciences - Sociology

Mundus

* Psychological Abstracts

* Public Affairs Information Service Bulletin

* Research in Education

Revue Bibliographique des Ouvrages de Droit, de Jurisprudence, d'Économie Politique, de Science Financière et de Sociologie

Revue Française de Sociologie

Science Citation Index

* Social Sciences Information

* Social Sciences and Humanities Index

* Sociological Abstracts

* Sociology of Education Abstracts

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* For full note see over

*Services considered important by sample of social science libraries and respondents to INFROSS questionnaire. (Bath University Library, Investigation into Information Requirements of the Social Sciences. Research Report no. 1, vol. 1, p.81-84, Bath University Library, 1971.) Librarians contacted included those at the following: British Library of Political and Economic Science; Howard League; Royal Anthropological Institute; Tavistock Institute of Human Relations; Cambridge University Institute of Criminology Library.

APPENDIX C

Data collection

(a) Journal titles card file (specimen entry)

Primary journal title:

Information Review on Crime and Delinquency (New York, N.Y.)

1	2	3	4	5	6	7	8	9	10

Key to coverage:

1-10, etc.: secondary services covering primary journal

(b) Data collection for time lag in entry

Article (Number refers to source list of articles)	Year and month of publication	Year and month of entry in secondary service	Total lag

APPENDIX D

List of DISISS Working Papers

No. 1 Comparison of results of science user studies with "Investigation into Information Requirements of the Social Sciences". July 1971.

No. 2 A machine readable data base of social science serials. November 1971.

No. 3 Relationship between primary and secondary literature in the social sciences: a study of secondary literature in criminology. June 1972.

No. 4 Characteristics of citations in social science monographs. June 1972.

No. 5 The selection of journal titles as sources for citation studies and pilot citation study. July 1972.

No. 6 Preliminary work on identifying networks of journal articles and authors in selected areas of the social sciences. July 1972.

No. 7 Size of monograph literature in social science (in preparation).

No. 8 CLOSSS: a machine readable data base of social science serials: progress report 1971-1972 (to be prepared).

No. 9 Monograph titles cited in social science journal articles (to be prepared).

No. 10 The relationship of frequency of citation to use and value (in preparation).